Wrightington, Wigan and Leigh Teaching Hospitals
NHS Foundation Trust

Panton Valentine Leukocidin Staphylococcus Aureus Infection (PVL-SA) v3

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Panton Valentine Leukocidin Staphylococcus Aureus Infection (PVL-SA)

Patient Information

Infection Prevention and Control Team

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What is Panton Valentine Leukocidin Staphylococcus Aureus Infection (PVL-SA)?

Staphylococcus aureus (SA) is a bacterium (germ) that commonly lives on healthy skin. About one third of healthy people carry it quite harmlessly, usually on moist surfaces such as the nostrils, armpits and groin.

Panton Valentine Leukocidin (PVL) is a toxin produced by certain types of Staphylococcus aureus. The toxin can kill white blood cells.

What type of illness does it cause?

All SAs, including PVL-SAs, can cause harm if the opportunity to enter the body arises, for example through a cut or a graze. They can cause boils or skin abscesses and are occasionally associated with more serious infections of the lungs, blood, joints and bones. Some SAs such as PVL-SA are more likely to cause infections than others.

How do you catch PVL-SA?

Anyone can catch PVL-SA infection. Infection can occur in fit, healthy people. PVL-SA can be picked up by having:

- Skin-to-skin contact with someone who is already infected, for example close family, or during contact sports e.g. rugby
- Contact with an item or surface that is contaminated with PVL-SA, for example, shared gym equipment, shared razors, shared towels.
- Crowded conditions, which increase the chance of passing on the infection, e.g., military accommodation, prisons, and boarding schools.
- Cleanliness issues; an unclean environment will encourage the bacteria to spread.

- Cuts and grazes, which provide the bacteria with an entry point to the body.

What are the symptoms of PVL-SA?

If PVL-SA enters the body through a graze or wound, it can infect the skin. PVL-SA symptoms include recurrent boils/abscesses on the skin, often in more than one place, that may require drainage. On rare occasions, PVL-SA may enter the blood stream, causing more serious infection of the bones, blood or internal organs such as the lungs.

How will it be diagnosed?

A swab is taken from the infected site (i.e. pus or exudate (oozing fluid) from an abscess or other lesions on the body), the nose, the groin, and any other relevant sites. Occasionally a sputum or urine sample is sent if clinically required by the doctor. Swabs/ sputum/ urine samples are tested for the presence of PVL-SA by the Public Health laboratory at Colindale.

How can PVL-SA be treated?

Minor skin infections

- Abscesses and boils may need to be drained by making a small cut in the skin with a sterile instrument and allowing the pus to drain from the abscess or boils.

- Antibiotic treatment is not normally required for minor infections.

Moderate skin and soft tissue infections

- Drainage of abscesses.

- Oral (by mouth) antibiotic treatment.

Severe skin and soft tissue infections, and infections of the lungs, blood or bones

- Intravenous antibiotics (directly into a vein) administered for 10-14 days. This treatment would require you to stay in hospital.

Once the initial infection has resolved, you will be offered further preventative treatment to reduce the risk of re-infection. A doctor will prescribe a topical (applied directly to the body) treatment, e.g., Octenisan body wash for you to wash with, and Octenisan antibacterial nasal ointment, both to be used for 5 days (or an alternative treatment as directed). Full instructions will be given to you on how to apply this treatment.

What precautions will be put in place whilst I am in hospital?

To reduce the spread of PVL-SA, you will be cared for in a single room with your own toilet facilities.

All hospital staff will wear an apron and gloves when caring for you, or when cleaning your room. A surgical mask and eye protection may also need to be worn. Staff will also wash their hands or use alcohol hand gel before entering and leaving your room.

Your visitors do not need to wear apron and gloves unless undertaking direct personal care i.e. assisting you with washing. If your visitors have any open cuts or sores, they must protect these with a waterproof dressing. Your visitors will be asked to wash their hands or use alcohol hand gel before entering and leaving your room.

What can I do?

It is important to take the medicines prescribed by the doctor; once all your infection sites have healed, use the preventative treatment wash and nasal ointment as instructed. If the infections return or a new infection appears on yourself or a family member, you must visit

your GP straight away.

To help stop the PVL-SA spreading you should also:

- Not touch, poke or squeeze infected skin. This contaminates your hands and can push the PVL-SAs deeper into the skin.
- Change bathing towels every day and do not share them.
- Change bed sheets frequently.
- Keep your home very clean, especially the bath and basin.
- Do not visit a gym or swimming pool until the infections have healed.
- Cover infected areas with dressings.
- Wash your hands frequently with liquid soap and water.

Can I go to work or school when I have a PVL- SA infection?

- You should not work as a carer in a nursery, hospital, residential or care home or similar place. You should not work in the food industry e.g. waiter/waitress, chef, food production, until your skin has healed and you have permission to return to work from your local Occupational health department, GP or manager.
- You may carry on with other types of work, providing you keep infected skin areas covered with clean, dry dressings. If you are not sure about working, contact your local Occupational health department or your GP.

- Children can go to school, providing their infected skin is covered with a clean, dry dressing which will stay dry and in place until the end of the school day; they also need to understand the importance of good hand hygiene. Children should not take part in contact sports i.e. rugby, or use communal gym equipment until their skin is healed.

- People who have eczema or a more generalised skin condition should remain off work or school until treatment has been completed for both the eczema/skin condition, and the PVL-SA infection. It is important that you continue to care for your skin to keep it in good condition as this will help to reduce the risk of PVL-SA re-infection and reduce the risk of the spread to others.

How do I prevent becoming infected again?

- You should take good care of your skin. If you suffer from eczema, discuss the best treatment for this with your GP.

- Keep cuts and grazes clean with liquid soap and water, and cover with dry dressings until scabbed over or healed.

- Shower or bathe and put on clean clothes daily.

- Change bedding and bathing towels frequently and wash them using normal washing detergent; use the highest temperature the materials will allow.
- Do not share personal items such as towels, razors, toothbrushes, water bottles and facecloths.

- In shared facilities such as gyms, ensure skin lesions have fully healed, and put a clean towel between your skin and the equipment. Importantly, shower afterwards and use a separate (second) clean towel to dry yourself. Wash any towels which you have taken to shared facilities after each visit.

- Seek medical help at the first sign of infection in a cut, such as redness, swelling, pain or pus.

- If you are found to carry PVL-SA persistently on your skin or nose, or if you suffer from repeated infections, you may be prescribed a further course of skin treatment. If this fails

to remove it and you suffer repeated infections, you may be prescribed antibiotics and skin treatment together. Sometimes the skin treatment will be extended to your household or close contacts. In these circumstances, it is important that all people in a household or social group are treated at the same time.

- If you have a further infection of any type, if you are admitted to hospital unexpectedly, or if you are going to be admitted to hospital for an operation, inform the doctor or nurse looking after you that you have had a PVL-SA infection. This will ensure that you receive appropriate treatment.

References

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